

What is claimed is:

1. A transparent masterbatch for improving the surface properties of thermoplastics, said masterbatch containing from 10% to 60% by weight of polyhedral oligomeric silicon-oxygen cluster units in accordance with the formula



where:

10 a, b, c = 0-1; d = 1-2; e, f, g = 0-3; h = 1-4; m+n+o+p ≥ 4; a+b = 1; c+d = 2; e+f = 3 and g+h = 4;

15 R = hydrogen atom, alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, cycloalkynyl group or polymer unit, each substituted or unsubstituted, or further functionalized polyhedral oligomeric silicon-oxygen cluster units attached via a polymer unit or a bridging unit,

20 X = oxy, hydroxy, alkoxy, carboxy, silyl, alkylsilyl, alkoxyisilyl, siloxy, alkylsiloxy, alkoxyisiloxy, silylalkyl, alkoxyisilylalkyl, alkylsilylalkyl, halogen, epoxy, ester, fluoroalkyl, isocyanate, blocked isocyanate, acrylate, methacrylate, nitrile, amino, phosphine or polyether group or substituents of type R containing at least one such group of type X,

the substituents of type R being identical or different and the substituents of type X being identical or different and containing from 40% to 90% by weight of a thermoplastic carrier material.

25 2. A masterbatch as claimed in claim 1, wherein the silicon-oxygen cluster unit comprises not more than 1 substituent of type X.

3. A masterbatch as claimed in claim 1 or 2, wherein the thermoplastic carrier material comprises further additives.

30 4. A masterbatch as claimed in at least one of claims 1 to 3, wherein the thermoplastic carrier material comprises at least one polymer selected from polyester, copolyester, polycarbonate, polyamide, copolyamide, polyether-block-amide, cyclic olefin copolymer (COC), polymethyl methacrylate, polyphenylene ether, polyurethane,

polysiloxane, polysilane, polytetrafluoroethylene, polyoxymethylene, polyvinyl chloride, vinyl chloride copolymer, polystyrene, copolymers of styrene, acrylonitrile-butadiene-styrene copolymers (ABS polymers), styrene-acrylonitrile copolymers (SAN polymers) or rubber.

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5. A masterbatch as claimed in claim 4, wherein the thermoplastic carrier material comprises at least one polymer selected from polyester, copolyester, polymethyl methacrylate, polycarbonate, polyamides, copolyamides or polyether-block-amides.

10 6.

- A masterbatch as claimed in at least one of claims 1 to 5, containing from 20 to 50% by weight of polyhedral oligomeric silicon-oxygen cluster units and from 50 to 80% by weight of the thermoplastic carrier material.

15 7.

- A masterbatch as claimed in at least one of claims 1 to 6, wherein the polyhedral oligomeric silicon-oxygen cluster unit has a molecular size of not more than 100 nm.

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8. A process for preparing a transparent thermoplastic, which comprises mixing one part by weight of the masterbatch of at least one of claims 1 to 7 into from 3 to 11 parts by weight of a further thermoplastic polymer mechanically without solvent at a temperature of at least 50°C.

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9. A transparent thermoplastic prepared by a process as claimed in claim 8, wherein the concentration of the polyhedral oligomeric silicon-oxygen cluster units is not more than 5% by weight.

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- A transparent thermoplastic as claimed in claim 9, whose scratch resistance is increased in relation to that of the plain thermoplastic.

11.

- A transparent thermoplastic as claimed in claim 9 or 10, whose glass transition temperature is increased by at least 5%.

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12. A transparent thermoplastic as claimed in at least one of claims 9 to 11, having a subjectively ascertainable enhanced tactility.